District of Columbia
Historic Preservation Guidelines

PORCHES AND STEPS ON HISTORIC BUILDINGS

Introduction

The porches and steps of Washington's historic residential buildings are two of their most important character-defining features. Functionally, they provide spaces to sit, entertain friends, as well as allow access to a building. Front porches and steps often present a formal appearance to the street and contain ornate details. On the other hand, rear porches and steps are often more informal and utilitarian in appearance.

Porches consist of several different components: the structure and decking; the stairs and railing; the supporting columns or structure; and the roof. Each of these components may be found in a variety of materials including wood, brick, metal, stone and concrete. Front and rear porches may be open without a roof or side walls, have a roof but no side walls, or be enclosed by screens or side walls. Most Victorian era rowhouses in Washington have cast iron stoops and railings, while many Victorian era detached houses and twentieth century rowhouses have porches with wood posts, columns and decorative millwork.

Porches and steps are usually character-defining features on residential buildings.

Design of Porches and Steps

Porches

Porches may be located on the front, rear or sides of free-standing residential buildings and rowhouses. Some porches are open, with only a floor and railing. Others have roofs that provide shade and protection from rain and snow. Still others, found primarily on rear elevations, may be enclosed by screens, windows and various types of wall materials, or they may be screened.

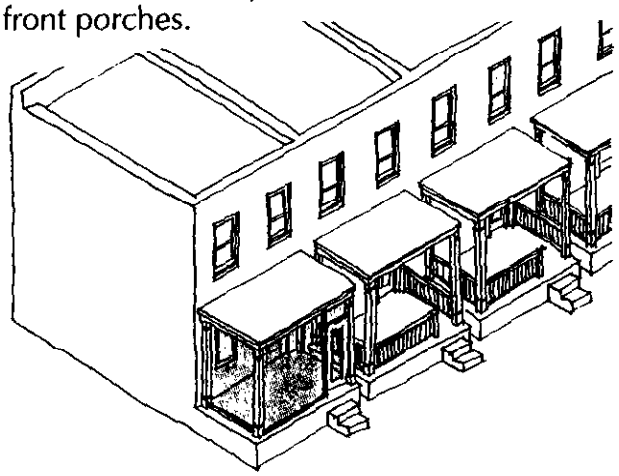
Front Porches on Rowhouses

Rowhouses constructed in the late nineteenth and early twentieth centuries often have front porches stretching half-way or fully across the facade. The porches are usually constructed of brick piers and wood columns, with wood or concrete floors, although other materials are found. Railings are almost always made of wood. Most porches on rowhouses originally contained flat or sloped roofs with beaded-board ceilings. Many of the original roofs have been removed over time. Sometimes the detailing and ornamentation on front porches is very elaborate, other times the porch is quite plain in design.

Historically, many rowhouses had front porches with roofs.

Rear Porches on Rowhouses

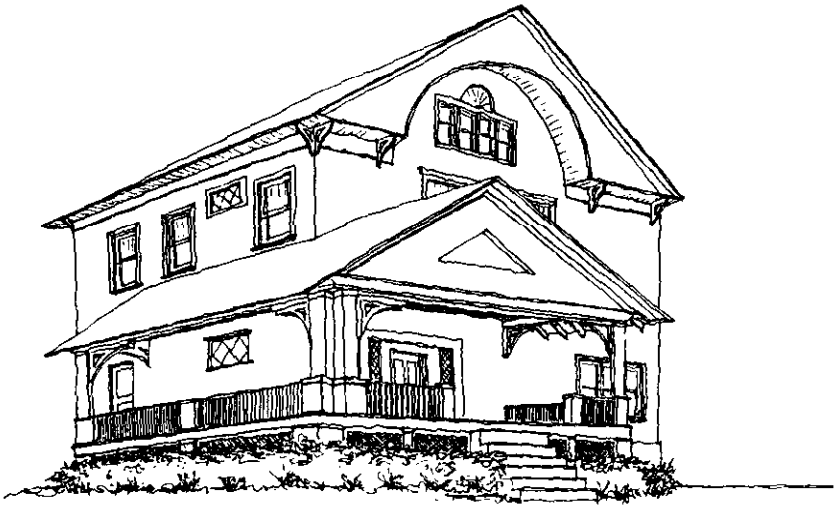
Open, enclosed and screened rear porches are found on many historic rowhouses. Some were constructed at the same time as the building, while others were added later. Many have been extensively remodeled primarily by enclosing the open porches to create additional interior space. Typically, the details and ornamentation on rear porches are less elaborate than that found on front porches.



Rear porches are often screened or enclosed.

Porches on Free-standing Buildings

Porches on free-standing residential buildings are found on front, rear and side elevations. They are constructed in a wide range of styles and materials. Depending primarily on a building's style, a porch may be one or two stories high, located only at the main entry door, stretch fully across the front facade, or even continue along the side elevation. Porches on free-standing residential buildings are usually covered by a roof. Porches on rear elevations are often also covered by a roof, or they may be enclosed or screened. Typically, a porch's roof, columns, ceiling, floor and railings are made of wood, while its piers are made of brick, concrete, cast block or stone.

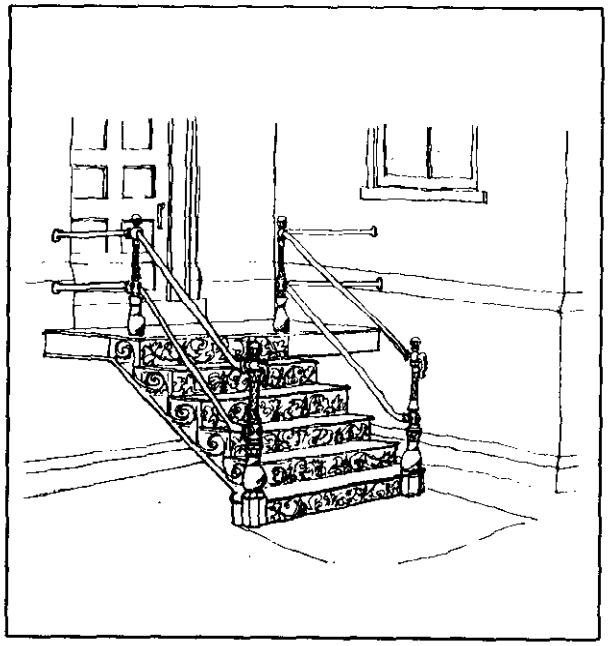


Free-standing residential buildings often have character-defining porches.

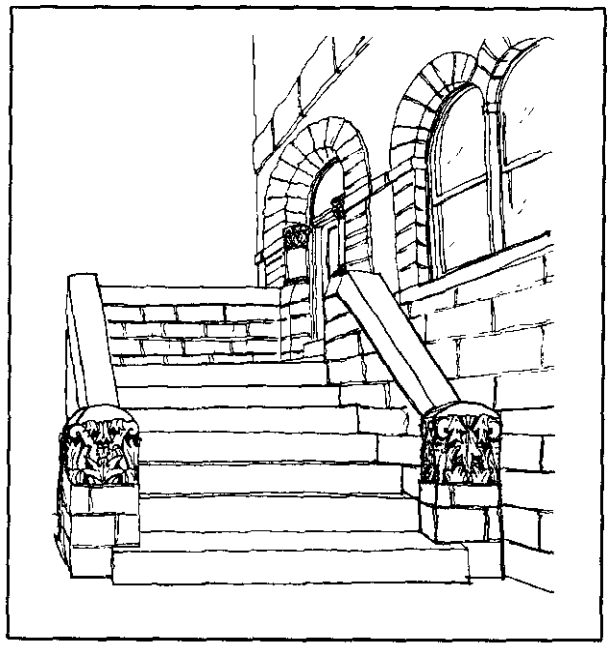
Steps

Nineteenth century Washington rowhouses were often constructed with a raised basement which allowed light and air to enter.(1) Generally, these rowhouses did not have porches; instead, they had ornate stoops, steps and railings of cast or wrought iron. Less frequently, brick or stone stoops and steps, with cast iron railings were used.

Iron steps are a particularly distinctive feature of early rowhouses because of their intricate details and ornamentation. Sometimes the steps are perpendicular to the facade, separating the entry from the sidewalk. In other cases the steps are located parallel to the facade, bringing the front wall close to the public sidewalk. In still other cases, the steps are located in the public space.(2)



Mass produced iron steps and railings are common on nineteenth century rowhouses.



Distinctive brick or stone steps and railings are found on mnay larger nineteenth and early twentieth century houses.

Iron steps were mass-produced in the last century. They included decorative patterns in the risers, such as stars, floral motifs and geometric or woven patterns. Some stairs will have the name of the manufacturer stamped into the design. Other stairs, particularly those on larger houses or other substantial nineteenth century residences, had distinctive stone and brick stoops, steps and railings.

1). A raised basement is also known as an English basement.

2). For further information on steps located in public space, see ***Landscaping, Landscape Features and Secondary Buildings in Historic Districts.***

Alterations to Porches and Steps

Historic porches and steps are important to defining the character of buildings. In some cases, historic porches and steps have been removed or inappropriately altered. In other cases, porches or steps that did not exist historically have been added; or a building owner may be considering adding a new porch or steps or altering existing ones. Before any alterations or additions are undertaken, a building owner should consult with the Historic Preservation Division.

Removing Front Porches

If not properly maintained, porches may deteriorate to the point where their removal and replacement is required. Unfortunately, in the past many building owners removed all or part of a deteriorated porch without replacing it. In other cases the original porch was replaced with one of inappropriate design or materials.

An original porch that has been removed should be replaced with a compatible porch. The design of the replacement should be based on documentary or photographic evidence. If similar historic porches exist in the neighborhood, they also may be used as a basis for the design of the replacement. Existing, badly deteriorated porches should not be removed without being replaced. Existing porches that are not compatible with the design of a building should, if possible, be removed and replaced with one that is compatible with a building.

Replacing missing front porches will enhance the character of a building.

Altering Front Porches

Alterations, such as removing an existing porch roof or a portion of its floor, changes the character of a building and is almost never appropriate. Similarily, adding outdoor carpeting or other non-traditional coverings to porch floors is rarely appropriate. These and other alterations to front porch floors and roofs changes the appearance of the main facade, compromising a building's historic character. If these or other inappropriate changes to the porch, floors or roofs exist, they should be removed and the porch returned to its original appearance.

Inappropriate alterations to porch floors and roofs detract from the character of a building.

Enclosing Front Porches

An open front porch is sometimes enclosed to provide additional, year-round living space, or screened to keep out insects. Enclosing a front porch is rarely acceptable because it drastically alters the appearance of the porch and the main facade of the building. Adding screens to open front porches may be acceptable if the screen is designed and installed in such a way that the open appearance of the porch is retained.

If a front porch has been enclosed or screened in the past, the property owner should consider returning the porch to its original open design. However, before doing so the owner should first determine if the existing design is compatible with the design of the building or if it has achieved significance in its own right. A compatibly designed enclosed or screened porch is one that has proportions, scale, materials, details, colors and other character-defining features that are appropriate to the building.

Enclosing a front porch is rarely appropriate since it will change the existing character of a building.

Removing or Enclosing Rear Porches

A building owner may wish to alter a rear porch by enclosing it with windows, walls or screens. Because rear porches are often not visible from a public street, such alterations may be possible. However, the design should be compatible with the scale, proportion, materials and other character-defining elements of the rear elevation. The design should also retain the sense of openness exhibited by the original porch. Removing a rear porch without replacing it is almost never appropriate.

Altering Front Steps

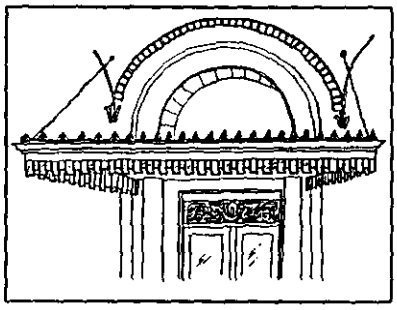
Steps and railings have sometimes been removed and replaced with ones that are not compatible with the character of a building. If so, the inappropriate steps and railings should be removed and replaced with ones of compatible design. In other cases, the orientation of the steps has been changed. For example, steps that were originally perpendicular to the facade are now parallel. It is particularly important that the original orientation of the steps be maintained. Similarly, other inappropriate alterations, such as covering front steps with outdoor carpeting, will detract from the appearance of a building and should be removed.

Maintaining the existing orientation of front steps is important.

Adding Porches and Steps

Adding a front porch or steps to a historic building, except in those cases where the original has been removed, will significantly alter the appearance of the front facade and thus is not appropriate. On the other hand, adding a new porch or steps to a rear elevation may be appropriate if the scale, proportions, materials, details and other character-defining elements of the new porch or steps is compatible with the character of the rear elevation.

Adding Awnings or Canopies

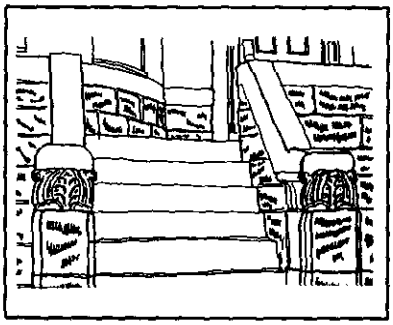


Canopies are found on some historic apartment buildings.

Awnings are not typically used on the front porches of historic residential buildings. However, when awnings are used, they are operable so that they can be opened and closed. If a historic porch awning or its frame is still present, it should be retained. If a historic awning is missing, the design of its replacement should be based on photographic or other documentary evidence. Adding a new awning to a rear porch is possible if its design and materials are compatible with the rear facade. Unfortunately, most awnings which exist on historic buildings are not original to the building. Often they are fixed and not operable, and are constructed of inappropriate materials such as metal, plastic or fiberglass. Inappropriate awnings should be removed.

On the other hand, canopies are found on historic apartment, commercial, institutional and government buildings. An existing canopy should be maintained and repaired if necessary. If missing, it should be replaced. The design of the replacement should be based on documentary or photographic evidence. Similarily, if a new canopy is to be added to a historic building, its design should be compatible with the facade of the building.

Removing or Replacing Details and Ornamentation



Existing details and ornamentation should be retained and if necessary repaired.

Removing existing details and ornamentation from porches and steps, without replacing them, is not appropriate because brackets, columns, railings, moldings and other details and ornamentation significantly contribute to their character. Replacing deteriorated details and ornamentation in a material that is not compatible with the original, such as replacing a wood column or railing with metal, is also not appropriate. If the deteriorated portion can not be repaired, the replacement should be in the same material or an appropriate substitute material. The replacement should be designed to be the same as the original in proportion, scale, texture amd other defining characteristics.

Maintaining and Repairing Porches and Steps

Porches and steps are subject to various forms of deterioration. Wood elements may rot or become infested with insects. Brick and stone elements may erode, spall, or their mortar joints may deteriorate, and cast and wrought iron elements may corrode.(3)

Building owners should regularly inspect and maintain existing porches and steps. When deterioration is first detected, the building owner should consult architects, engineers and contractors knowledgeable in the materials and methods of construction of historic porches and steps. In most cases, consideration should first be given to repairing only those areas needing attention, using in-kind materials, that is, using the same material as existing. If the deterioration is more extensive, replacing the entire porch or steps in-kind should next be considered. Only after repair or replacement in-kind has been determined not to be technically or economically feasible should the owner consider using a substitute material that is designed to be compatible to the existing.

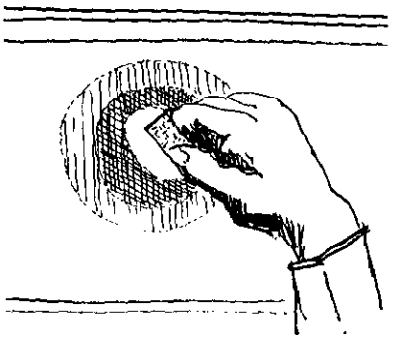
Wood

Wood porch columns, ceilings, floors, railings, and steps were historically painted to protect them from the weather. When paint blisters, cracks, flakes or peels, that protection is lost. Loose sections of paint should be removed by hand-sanding and bare wood primed before repainting. If possible, the same type of paint as the existing (oil or latex) should be applied. Using the same type of paint creates a better bond between the new and old paint.

Surfaces that are heavily encrusted with paint, particularly when details and ornamentation have been obscured, should be stripped to the bare wood before repainting. This is best done using an appropriate chemical stripper. Power sanding, sandblasting or using heat guns or other methods likely to damage the wood should not be considered.

Wood elements constructed prior to 1960 may contain lead-based paint. Before stripping and repainting a historic building, the owner should have paint samples tested by a reputable testing laboratory. If lead-based paint is found, the owner should contact an approved paint contractor to remove and properly dispose of the lead-based paint.

3). Spalling is the flaking-off of the surface of brick or stone caused by water freezing under the surface. For more information, see ***Walls and Foundations of Historic Buildings.***



Carefully sanding painted wood surfaces will expose historic paint colors.

Selecting a new paint color for a wood porch and steps is often a difficult decision. One method is to use the historic paint colors based on analyzing the various existing coats of paint. Another is to consult the numerous books available on appropriate paint colors for period residential buildings. The paint scheme selected for a porch or steps should complement the colors of the facade and those of neighboring buildings. This is particularly important for porches and steps on rowhouses.

If a wood porch or steps has not been properly maintained it is probably deteriorated. In cases where the damage is minor, the affected area may be treated with an appropriate wood consolidant, such as epoxy, after the application of a fungicide. If details or ornamentation are damaged extensively, they may be removed and replaced using the same or a similar species of wood, finished and detailed in the same manner as the existing. If structural wood members are damaged and require replacement, the details and ornamentation should be carefully removed prior to replacing the damaged structural members. The existing details should then be reinstalled.

Brick and Stone

Brick and stone elements of porches and steps may erode or become dirty through airborne grit or pollutants or be defaced by graffiti. Brick and stone steps may become worn through use. Brick and stone is also subject to spalling or the mortar joints may erode.

Spalling is the result of water penetrating behind the surface of brick or stone through pores and cracks. In cold weather the water freezes and expands, causing the surface to spall or break away. Spalling may also be the result of the type of stone used or because the stone was improperly laid. For example, certain sandstone and limestone is very porous and thus susceptible to water penetration. In other cases the stone may have been laid with the cleavage planes exposed, allowing water to penetrate the surface.(4) Spalling of stone and brick may also be the result of sandblasting or other inappropriate cleaning techniques that remove a stone's protective surface.

Lightly spalled stone may be patched using appropriate cement-based materials. However, it is often difficult to match the color of the existing stone and over time the patch may become more evident as it weathers differently from the stone. An alternative to patching is to slow the deterioration by applying an appropriate stone consolidant. Heavily spalled stone and spalled brick should be replaced in-kind.

The mortar used in brick and stone porches and steps is also subject to deterioration. When the joints have become recessed 1/2" or more behind the original surface, a building owner should consider repointing, or tuckpointing, with new mortar. The mortar used to repoint historic brick and stone should

4). Cleavage planes are the lines along which a stone cleaves or breaks naturally.

be chemically similar to the existing. It is particularly important that modern high-strength Portland cement mortar not be used to repoint joints originally containing low-strength cement mortar. To do so may lead to other maintenance and repair problems. Old mortar should be removed from its joints by hand tools. Using saws and other power tools will chip the edges of the brick and stone. New mortar should be profiled in the same manner and be of the same color as the existing.(5)

Cleaning Brick and Stone

Dirt and pollutants may contribute to spalling and other forms of brick and stone deterioration. Cleaning brick and stone elements of porches and steps will not only reduce potential maintenance problems, but will also improve their appearance. Cleaning brick and stone should begin with the gentlest effective means possible, proceeding in careful steps to more aggressive methods until satisfactory results are achieved. This is done to protect the physical and visual integrity of the brick or stone, since overly aggressive cleaning methods can erode surfaces and cause extensive maintenance problems.

The gentlest cleaning method should be tested on a small inconspicuous area of the porch or steps to determine its effectiveness. If the gentlest means does not produce the desired results, the next most aggressive means should be tested, and so forth until an effective means is found. The gentlest brick and stone cleaning method is water washing with detergent, using a hand-brush. If this proved to be unsuccessful, the owner should next try power washing with water and steam starting at low-pressure and gradually increasing the pressure until the dirt, pollutant or graffiti is removed. The most aggressive method to safely clean brick and stone is chemical cleaning. Selecting an appropriate chemical cleaner for the substance to be removed and for the type of brick or stone is very important. Controlling run-off from the chemical cleaner is important. Sandblasting, or blasting with grit, plastic beads or other substances, should never be considered.

Concrete

Concrete steps or porch floors may chip, spall or erode, making them difficult or dangerous to walk on. Minor damage may be repaired using patching concrete textured, colored and finished as the existing. Extensively damaged concrete steps or porch floors should be replaced in-kind. Pre-cast concrete steps should not be used unless they match the existing in design, texture, profile, color and other defining characteristics.

Cast and Wrought Iron

Cast iron steps, wrought iron railings and other cast or wrought iron features of porches and steps should be painted to

5). For further discussion of mortar joints, see ***Walls and Foundations of Historic Buildings.***

protect them from corrosion. Building owners should have existing paint tested for lead before stripping cast and wrought iron elements. Old paint may be stripped by hand-sanding or by using an appropriate chemical stripper. If the metal component is detachable without harming it or adjacent materials, the component may be removed and dipped in an appropriate chemical bath. After clearning, cast and wrought iron should immediately be primed and repainted. Historically, cast iron and wrought iron were painted black.

Substitute Materials

While it is always best to repair and replace historic porches and steps in the original material, in some cases it is not technically or economically feasible to do so. In such cases, property owners may consider using a substitute material. When selecting a substitute material, building owners should pay particular attention to the new material's expansion, contraction and weathering properties as well as to its chemical properties. Since materials expand and contract at different rates due to temperature changes and sunlight falling on surfaces, installing a new material with different expansion and contraction properties from the existing may cause the joints between old and new materials to open. Similarly, materials weather at different rates, changing appearance over time. When a substitute material is considered for repair or replacement, its weathering properties should be similar to the existing. New materials may also react chemically to adjacent existing materials causing them or the historic material to deteriorate rapidly.

Substitute Materials

The following substitute materials may be appropriate for replacing components of historic porches and steps. Before proceeding with a substitute material, building owners should consult with the Historic Preservation Division.

Historic Material	Substitute Material
- Wood	- Fiberglass for railings, columns, and details only
- Stone	- GFRC (glass-fiber reinforced concrete), Polymer Concrete or Epoxy, Concrete for railings, columns and details only
- Metal	- Fiberglass for details only

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